

**PUBLIC NOTICE**  
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)**

**SHINTECH LOUISIANA, LLC**  
**HYDROCHLORIC ACID PRODUCTION FURNACE NO. 2**  
**PROPOSED INITIAL PART 70 AIR OPERATING PERMIT AND PSD PERMIT**  
**AND USE OF EMISSION REDUCTION CREDITS (ERC)**

The LDEQ, Office of Environmental Services, is accepting written comments on the initial Part 70 Air Operating Permit and PSD permit and Use of Emission Reduction Credits (ERC) for Shintech Louisiana, LLC, P.O. Box 358, Addis, LA 70710-0358 for the Hydrochloric Acid Production Furnace No. 2. The facility is located at 26270 Hwy 405, Plaquemine, Iberville Parish.

Shintech Louisiana, LLC (Shintech), a wholly owned subsidiary of C-K Tech, Inc., proposes to construct and operate a second Hydrochloric Acid Production Furnace (HAPF-2) at Shintech's manufacturing facility located on the west bank of the Mississippi River near Plaquemine, Louisiana in Iberville Parish. Shintech considers the HAPF-2 to be part of the entire SPP project (including SPP-1, SPP-2, HAPF-1, and HAPF-2) for federal New Source Review (NSR) applicability determination. Considering that there will be a Resource Conservation and Recovery Act (RCRA) permit associated with HAPF-2, for administrative purposes, Shintech requested a stand alone PSD and Title V permits for the HAPF-2 unit rather than modifications to the current SPP permits.

For the HAPF-2 portion of the project, Shintech proposes to offset the VOC and NO<sub>x</sub> increases of 3.14 and 2.49 tons per year (TPY), respectively, with banked Emission Reduction Credits (ERC) at a ratio of 1.3:1, for a total of 4.08 TPY VOC and 3.24 TPY NO<sub>x</sub>. Shintech will withdraw ERC from the LDEQ Emission Reduction Credit Banking System. The total estimated emissions withdrawal in tons per year are as follows:

ERC Certificate No.	VOC Balance Before	VOC Offset	VOC Balance After
126578PER20070011-1	23.21	4.08	19.72

ERC Certificate No.	NO <sub>x</sub> Balance Before	NO <sub>x</sub> Offset	NO <sub>x</sub> Balance After
126578PER20070011-2	130.05	3.24	126.81

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Emissions</u>
PM <sub>10</sub>	6.04
SO <sub>2</sub>	0.01
NO <sub>x</sub>	2.49
CO	15.17
VOC *	3.14

Estimated actual emission increases due to the project in tons per year are as follows:

Pollutant	Contemporaneous Increase	Project Increase	Net Change	PSD/ NNSR Threshold	NSR Review Required

PM <sub>10</sub>	+ 112.49	+ 6.04	+ 118.53	15 / NA	Yes
SO <sub>2</sub>	+ 5.53	+ 0.01	+ 5.54	40 / NA	No
NO <sub>x</sub>	+ 139.49	+ 2.49	+ 141.98	40 / 25	Yes
CO	+ 405.65	+ 15.17	+ 420.82	100 / NA	Yes
VOC	+ 97.90	+ 3.14	+ 101.04	NA / 25	Yes

A technical review of the working draft of the proposed permit was submitted to the facility representative and the LDEQ Surveillance Division. Any remarks received during the technical review will be addressed in the "Worksheet for Technical Review of Working Draft of Proposed Permit". All remarks received by LDEQ are included in the record that is available for public review.

Written comments, written requests for a public hearing or written requests for notification of the final decision regarding this permit action may be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. **Written comments and/or written requests must be received by 12:30 p.m., Monday, June 14, 2010.** Written comments will be considered prior to a final permit decision.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The Permit Applications, Proposed Permits, Emission Reduction Credit Certificates, and Statement of Basis are available for review at the LDEQ, Public Records Center, Room 127, 602 North 5<sup>th</sup> Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at [www.deq.louisiana.gov](http://www.deq.louisiana.gov).**

Additional copies may be reviewed at Iberville Parish Library, Headquarters Library, 24605 J. Gerald Berret Blvd., Plaquemine, LA 70764.

Inquiries or requests for additional information regarding this permit action should be directed to Anthony Randall, LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3130.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at [deqmaillistrequest@la.gov](mailto:deqmaillistrequest@la.gov) or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

**Permit public notices including electronic access to the proposed permit and statement of basis can be viewed at the LDEQ permits public notice webpage at [www.deq.louisiana.gov/apps/pubNotice/default.asp](http://www.deq.louisiana.gov/apps/pubNotice/default.asp) and general information related to the public participation in permitting activities can be viewed at [www.deq.louisiana.gov/portal/tabid/2198/Default.aspx](http://www.deq.louisiana.gov/portal/tabid/2198/Default.aspx).**

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at [http://www.doa.louisiana.gov/oes/listservpage/ldeq\\_pn\\_listserv.htm](http://www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm).

**All correspondence should specify AI Number 126578, Permit Number 3066-V0 and PSD-LA-739, and Activity Number PER20070011 and PER20070012.**

**Scheduled Publication Date: Thursday, May 13, 2010**

**BOBBY JINDAL**  
GOVERNOR



**PEGGY M. HATCH**  
SECRETARY

**State of Louisiana**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**ENVIRONMENTAL SERVICES**

Certified Mail No.

Activity No.: PER20070011  
Agency Interest No. 126578

Mr. David V. Wise  
Shintech Louisiana, LLC.  
Plant Manager  
PO Box 358  
Addis, LA 70710-0358

RE: Part 70 Initial Operating Permit, Shintech Louisiana LLC - Hydrochloric Acid Production Furnace 2  
Plaquemine, Iberville Parish, Louisiana

Dear Mr. Wise:

This is to inform you that the permit for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the \_\_\_\_ of \_\_\_\_\_, 2015, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

Permit No.: 3066-V0

Sincerely,

Cheryl Sonnier Nolan  
Assistant Secretary  
CSN:alr  
c: EPA Region VI

**AIR PERMIT BRIEFING SHEET**  
**AIR PERMITS DIVISION**  
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Hydrochloric Acid Production Furnace 2**  
**Agency Interest No.: 126578**  
**Shintech Louisiana LLC**  
**Plaquemine, Iberville Parish, Louisiana**

**I. Background**

Shintech Louisiana, LLC (Shintech) a wholly owned subsidiary of C-K Tech, Inc., proposes to construct and operate a second Hydrochloric Acid Production Furnace (HAPF-2) at Shintech's manufacturing facility located on the west bank of the Mississippi River near Plaquemine, Louisiana in Iberville Parish. The complex is referred to as Shintech Plaquemine plant (SPP) and includes the following facilities:

- SPP-1 – Authorized by Prevention of Significant Deterioration (PSD) Permit No. PSD-LA-709 and Clean Air Act (CAA) Title V Permit No. 1280-00118-V2 issued on March 1, 2010 by the Louisiana Department of Environmental Quality (LDEQ)
- HAPF-1 – Authorized by PSD Permit No. PSD-LA-738 issued February 27, 2009 and CAA Title V Permit No. 3064-V0 issued on February 27, 2009.
- SPP-2 – Authorized by PSD Permit No. PSD-LA-731 and Clean Air Act (CAA) Title V Permit No. 3063-V0 issued on July 10, 2008 by the Louisiana Department of Environmental Quality (LDEQ)
- HAPF-2

SPP-1 and SPP-2 are vertically integrated polyvinyl chloride (PVC) manufacturing facilities that also produce intermediate products, including chlorine (and caustic soda as a byproduct), ethylene dichloride (EDC), and vinyl chloride monomer (VCM). Process units include chlor-alkali units (C/A unit), VCM units, and a PVC unit. The C/A units use brine to produce chlorine ( $\text{Cl}_2$ ) and sodium hydroxide ( $\text{NaOH}$ ) by membrane based electrolysis process. The VCM unit produces EDC by reacting ethylene and chlorine in a direct chlorination reactor. The EDC is purified by distillation and sent to the cracking furnaces to yield VCM and hydrochloric acid ( $\text{HCl}$ ). The VCM is purified and sent to storage spheres. EDC that was not cracked is sent back to the EDC purification trains.  $\text{HCl}$  is recovered and used in a second EDC formation process called oxyhydrochlorination. Purified VCM is polymerized to form PVC.

Shintech considers the HAPF-2 to be part of the entire SPP project (including SPP-1, SPP-2, HAPF-1, and HAPF-2) for federal New Source Review (NSR) applicability determination. Considering that there will be a Resource Conservation and Recovery Act (RCRA) permit associated with HAPF-2, for administrative purposes, Shintech requests stand-alone PSD and Title V permits for the HAPF-2 unit rather than modifications of the current SPP permits.

This is the Part 70 operating permit for the facility.

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**II. Origin**

A permit application and Emission Inventory Questionnaire were submitted by Shintech Louisiana LLC on December 21, 2007 requesting a Part 70 operating permit.

**III. Description**

The SPP-2 will produce liquid byproducts in the VCM unit. The byproduct streams are considered waste streams classified as D001, K019, and K020 under the Resource Conservation and Recovery Act (RCRA) regulations 40 CFR 261. The liquid byproducts are rich in chlorine. To better manage the waste streams and provide HCl to the process, Shintech proposes to install HAPF, Emission Point Number (EPN) 2H-1, that will combust the waste and produce HCl and HCl Storage Tank Scrubber, EPN 2H-2, that will support the HAPF.

In the absence of HAPF-2, liquid byproducts from the VCM unit are sent to an off-site location for use as feedstock in other chemical processes or disposal. Upon completion of the HAPF-2 project, the liquid byproducts will be sent to the HAPF to generate HCl. HCl generated by the HAPF will be combined with HCl flow recovered from the cracking process and sent to the oxhydrochlorination process. Additionally, heat from the combustion of liquid byproducts in the HAPF will be recovered by a waste heat boiler. Installation of the HAPF will form a closed-loop system, achieve maximum material and energy efficiency, and minimize waste generation.

**Overview of the HAPF Process**

As a waste treatment system, the HAPF-2 unit will consist of liquid waste storage tanks, a waste storage feed tank, a combustion chamber (i.e. the furnace), a waste heat boiler, a bubble cap tray acid absorber, a bubble cap tray caustic scrubber, a selective catalytic reduction system (SCR) for nitrogen oxides (NO<sub>x</sub>) control, and an exhaust stack. The liquid waste storage tanks are included in PSD Permit No. PSD-LA-731 and Title V Permit No. 3063-V0; therefore, these tanks are not included in this air permit application.

The liquid waste from the distillation process will be stored in three tanks. The liquid waste will be pumped from one of the storage tanks to waste feed tank 2MTK-501, and fed to the furnace. The liquid waste will be combusted in the furnace and chlorinated organic compounds will be decomposed to form HCl. The flue gas from the furnace will pass through a heat recovery boiler before it enters a quencher. In the quencher, acid solution from downstream process vessels will be sprayed to the flue gas to cool it for absorption in the next stage of the process, which will be an HCl absorber. The HCl absorber is a bubble cap tray column where HCl in the flue gas will be captured as aqueous HCl. The rich aqueous HCl from the bottom of the

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absorber will be fed to an HCl stripper that reverses the absorption process and transfers HCl from aqueous solution into vapor phase for process use as feedstock in the VCM Unit. The lean solution from the bottom of the stripper will be returned to the absorber as absorbing solution, where it will absorb HCl gas to form rich solution. The rich solution can then be fed again to the stripper as a feed stock. With the majority of HCl in the exhaust removed in the absorber, the off-gas from the absorber will be directed to a caustic scrubber where residual HCl will be removed for the purpose of air pollution control. The cleaned off-gas will be routed through a Selective Catalytic Reduction (SCR) system to reduce NO<sub>x</sub> before it is discharged to the atmosphere.

General information for the system is provided below:

Manufacturer:	To be determined (TBD)
Maximum waste feed:	7,000 lbs/hr of liquid waste
Auxiliary fuel:	Natural gas (for startup only)
Steam production:	22,500 lb/hr (10.2 metric tons/hr) at 210 pounds per square inch gauge (psig), saturated
Recovered HCl:	4,920 lbs/hr (2,230 kilograms per hour (kg/hr)), approximately 95% recovery
Scrubber blowdown:	26,000 lbs/hr (11.8 metric tons/hr)
Stack gas flow rate:	746,000 scfh (19,600 Nm <sup>3</sup> /hr)

There are no process vents connected to the unit, i.e., HAPF-2 is not used as an air pollution control device for process vents at the plant.

More detailed descriptions are provided below for each component of the HAPF-2 system.

### **Waste Storage Tanks**

Liquid waste generated during the EDC production process will be collected in three storage tanks (2MTK-499A, 2MTK-499B, and 2MTK-496). The liquid waste storage tanks are constructed of carbon steel. The capacities of 2MTK-499A, 2MTK-499B, and 2MTK-496 are 50,000 gallons, 50,000 gallons, and 300,000 gallons, respectively. The storage tanks are vented to vapor thermal oxidizers. These three storage tanks and the vapor thermal oxidizers have been permitted in PSD Permit No. PSD-LA-731 and Title V Permit No. 3063-V0. The three storage tanks will meet all RCRA requirements. They will be used as <90-day waste storage tanks, as the waste will be shipped off site for disposal until air and RCRA permits are issued for the HAPF.

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Tanks 2MTK-499A and 2MTK-499B will be used as primary storage tanks. Tank 2MTK-496 will serve as a secondary storage tank and will be used as a surge tank for the two primary tanks. The liquid waste will be pumped from one of the storage tanks to the waste feed tank 2MTK-501, from which the liquid waste will be fed to the HAPF for combustion. A small portion (10-20%) of the discharges of these pumps will be returned to their respective tanks to keep the liquid in the tanks agitated and mixed. Mixing by recirculating a portion of the discharges to the tanks provides consistency within the waste stream, which minimizes variability of feed composition and probability of uncharacteristic waste surge.

**Waste Feed System**

Liquid feed will be hard piped from storage tanks to an 8,000 gallon feed tank (2MTK-501). When good combustion is established in the combustion chamber and prerequisite conditions for waste feed are met, the liquid waste is pumped at a pressure of 120 psig to feed to the combustor via flow rate control valve. Approximately 10-20% of the feed to the pump discharge is redirected back to the feed tank. This small stream of recirculation keeps the waste in the feed tank agitated and well mixed. The majority of the feed pump discharge goes to the combustor. A block valve is also installed in the feed line for waste feed cutoff. The liquid waste is pumped into the combustion chamber through an injector gun with atomizing compressed air at a maximum rate of 7,000 lbs/hr. The atomizing air is supplied at a pressure of 100 psig. The waste injection rate is controlled by flowrate indicator and controller (FIC) with the "high" (H) limit established for maximum feed rate.

2MTK-501 will vent to the SPP-2 vapor thermal oxidizers in the same fashion as other vents from the process area. The vapor flow rate from the feed tank vent to the thermal oxidizers is expected to be negligible compared to the current total vapor flow to the thermal oxidizers, and the emissions from the thermal oxidizers are not expected to change due to adding the small feed tank vent.

**Auxiliary Fuel Feed System**

Auxiliary fuel is natural gas and will be used only for startup. Natural gas is used during the first 1 to 2 days of operation to pre-heat the unit. Natural gas is delivered via a flow rate control valve through a gas injector on the burner. The expected maximum heat release of the auxiliary fuel system will be 19.8 million British thermal units per hour (MM Btu/hr) for 24 hours during preheating.

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**Combustion Chamber**

The HAPF-2 combustion chamber is designed based on proven technologies, successful installations, and long operation experience in other facilities including a facility operated by Shintech's parent company in Japan, which has been in operation for 35 years. The combustion chamber is a horizontal refractory lined vessel. It has a 31'-9" long carbon steel cylindrical shell with an outer diameter of 11'-2". The total volume of the combustion chamber is 1,500 cubic feet. At the maximum combustion gas flow rate proposed in this CPT, the dwell time in the combustion chamber is approximately 2.0 seconds.

A vortex type burner is mounted on one end of the combustion chamber. The refractory lining consists of a high temperature refractory firebrick backed up by an insulating brick. The refractory lining is designed for a maximum operating temperature of 2,820 °F. The operating temperature will be kept constant at approximately 2,640 °F by regulating the excess air ratio. Excess air is monitored in the SCR inlet by QIA-O2 for which a low limit (L) is established for complete combustion. Operating temperature is monitored by three thermocouples placed at 27, 28, and 29 feet downstream from the tip of the burner. Combustion chamber temperature is represented by average values of three valid readings from the three thermocouples. An operating range for combustion chamber temperature will be established. If the combustion chamber temperature falls outside of the range, waste feed will automatically be cut off.

The combustion chamber will be operated at a positive pressure of 3-4 psig. The chamber itself has an integral carbon steel shell. All connections (e.g., the transition from the combustion chamber to the heat recovery boiler) will be sealed by gaskets designed for this type of applications to prevent fugitive emissions from the combustion chamber. Leak checks will be conducted periodically to ensure the integrity of the seals.

Organics in the waste will be almost completely oxidized to form carbon dioxide (CO<sub>2</sub>), water (H<sub>2</sub>O), HCl, and a small amount of Cl<sub>2</sub>. Low pressure steam will be added to the burner, as required, to reduce the formation of free Cl<sub>2</sub>.

**Combustion Air Supply**

Combustion air is supplied to the combustion chamber by a blower. A flow control valve regulates the combustion air proportionally to keep a suitable excess air ratio. The combustion air enters the chamber at the burner windbox and passes through a set of directional vanes that impart a strong rotational (vortex) motion to the air. The vortex goes through a restriction at the inlet to the combustion chamber. Waste feed and natural gas are introduced into the center of the vortex.



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**Waste Heat Recovery Boiler**

Combustion gas enters a waste heat recovery boiler to produce steam. The boiler is fabricated from carbon steel. It is a single pass, elevated drum, firetube boiler. It uses natural circulation with an external steam drum that provides a demisting device for vapor/liquid separation. A heat resistant cast lining is applied to the surface of the inlet tube sheet and ferrules are installed at each of fire-tube inlets. A continuous blow down device is provided for maintaining the quality both of the generated steam and water in the boiler. The pressure of the boiler is kept constant at 200 to 230 psig by regulating the amount of steam. The water level in the steam drum is kept constant by regulating the amount of the boiler feed water.

The waste heat boiler has a steam generating capacity of 22,500 lbs/hr (10.2 metric tons/hr) and a heating duty of 23.9 MM Btu/hr.

The combustion gases enter the boiler at a temperature of approximately 2,640 °F and exit the boiler at a temperature approximately 660 °F. The combustion gas dwell time in the boiler section is approximately 0.5 seconds.

**Quencher, Hydrochloric Acid Absorber, and Stripper**

The liquid waste contains chlorinated organic compounds. Upon combustion, the chlorinated organic compounds will be decomposed and form CO<sub>2</sub> and H<sub>2</sub>O as well as HCl. The system is designed to recover HCl. Capturing HCl is accomplished by unit operation of an absorber. The combustion gases exit from the waste heat boiler at a temperature of 660 °F, which is too hot for gas absorption operation. In order to achieve effective HCl absorption, a quencher is used to cool the combustion gases before they enter the absorber.

The quencher is a vertical downflow, acid proof brick-lined, spray tower with a circulating liquid pump. Combustion gases enter from the top of the quencher and are cooled by direct contact with the circulating liquid, which is sprayed at the top of the quencher. The gases are quenched from 660 °F to their saturation temperature of approximately 177 °F as they flow down through a set of the spray contactors. The cooled gases exit the quencher from the bottom of the spray tower. The quencher design flow rate is 494,000 scfh (14,000 Nm<sup>3</sup>/hr). Most of non-volatile matters such as ferric chloride (FeCl<sub>3</sub>) are caught in the quencher and discharged in the purge acid, which is drawn from the circulating liquid between the absorber and the stripper. Make-up liquid containing HCl is supplied via the absorber section.

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Plaquemine, Iberville Parish, Louisiana**

The acid absorber is constructed of fiber reinforced plastic (FRP) and polyvinylidene difluoride (PVDF) plastic. The acid absorber is a bubble cap tray design. The gases from the quencher enter the absorber from the bottom of the absorption column, counter flow against absorbing liquid, and exit from the top of the column. HCl is absorbed by contact with lean acid from the HCl stripper and water on the bubble cap trays in the absorber column. Absorbing water is supplied at the top of the column. Almost all the HCl in the combustion gases is absorbed in the liquid as HCl solution. A part of the HCl solution is sent to the quencher as make-up liquid.

Rich acid is recovered from the bottom of the absorber and fed to a stripper as a feed stock. HCl is stripped in the stripping tower. HCl gas is produced at the top of the stripper. A condenser removes water from the HCl gas. The gas is pressurized by a gas compressor and is recovered as a product. Condensate is returned to the top of the stripper. The bottom solution of the stripper is returned to the absorber as absorbing solution that absorbs HCl gas to form a rich solution, which is fed again to the stripper as a feed stock.

The acid absorber has dual functions – it produces HCl for process use and it serves as an air pollution control device to remove acid from the flue gas.

#### **Caustic Scrubber**

A caustic scrubber is designed as an air pollution control device to remove residual HCl and other pollutants in the gas stream exiting from the acid absorber. Flue gases exit from the top of the absorber and directly enter the bubble cap tray caustic scrubber column. Constructed of FRP and PVDF, the scrubber is 38'-5" high with a diameter of 7'-10". Caustic soda and dilution water are supplied by flow rate control as scrubbing media to polish the flue gas cleanup and pick up most of the remaining chlorine and hydrochloric acid.

Reducing agent is also supplied by flow rate control to the scrubbing liquid to decompose sodium chlorite (NaClO), which is formed by a reaction between caustic soda and chlorine. Sodium chlorite needs to be removed because it may cause corrosion problem with the construction materials of the scrubber and downstream equipment.

Scrubbing water is drawn from the scrubber bottom and sent to the facility's wastewater treatment plant. After exiting the scrubber, the flue gases are passed through a demister where excess mist and condensed liquids are collected and removed.

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**SCR System**

The SCR system is designed to remove approximately 90% of NO<sub>x</sub> from the flue gas. The system consists of a gas heater, filter, and a de-NO<sub>x</sub> catalyst bed. The flue gas from the caustic scrubber enters the gas heater, which by combining the flue gas with the gas heater combustion gases raises the temperature to approximately 350–430 °F—the catalyst working temperature.

The heated gas enters a filter to remove solids, such as sodium chloride, that may reduce catalyst activity. After the filter, aqueous ammonia solution is injected into the duct with atomizing air upstream of SCR catalyst bed. The SCR catalyst is fixed on a cassette type ceramic structure. Ammonia is used as a reagent. Ammonia injection is controlled by regulating the aqueous ammonia feed rate to yield the desired ammonia to NO<sub>x</sub> mole ratio. A continuous NO<sub>x</sub> monitoring device at the outlet of SCR system, i.e. the exhaust stack, is used to regulate the aqueous ammonia injection rate.

**Exhaust Stack**

After the SCR, the cleaned flue gases are discharged into the atmosphere through an 82-foot tall free standing stack. The stack is cylindrical with an internal diameter of 31.5 inches. It is constructed of carbon steel.

Sampling ports will be installed on the stack at an elevation that is free of flow disturbance. There will be at least one pair of sampling ports, 90 degrees apart, and they will comply with EPA Method 1. Each sampling port will be a 4-inch nozzle to facilitate iso-kinetic sampling probes. A sampling platform surrounding the stack will be constructed near the sampling ports. A ladder on the stack with a cage will provide sampling crew members to access the sampling platform.

A sampling probe for CEMS will also be installed on the stack. A heated sampling line will convey the sample from the probe to the CEMS on the ground.

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Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Emissions</u>
PM <sub>10</sub>	6.04
SO <sub>2</sub>	0.01
NO <sub>x</sub>	2.49
CO	15.17
VOC *	3.14

**\*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

<u>Pollutant</u>	<u>Emissions</u>
Benzene	0.03
Carbon Tetrachloride	0.13
Chlorobenzene	0.02
Chloroethane	<0.01
Chloroform	0.16
Chloroprene	0.07
1,2-Dichloroethane	0.17
Hexachloroethane	0.06
1,1,2,2-Tetrachloroethane	0.03
1,1,2-Trichloroethane	1.10
Trichloroethylene	0.01
Vinyl Chloride	0.02
Vinylidene Chloride	0.01
Total	1.79
Other VOC (TPY):	1.35

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**Plaquemine, Iberville Parish, Louisiana**

**Non-VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

<b>Pollutant</b>	<b>Emissions</b>
Ammonia	1.84
Chlorine	1.15
Dichloromethane	<0.01
Hydrochloric Acid	0.76
Tetrachloroethylene	0.01
<b>Total</b>	<b>3.76</b>

Estimated actual emission increases due to the project in tons per year are as follows:

<b>Pollutant</b>	<b>Contemporaneous Increase</b>	<b>Project Increase</b>	<b>Net Change</b>	<b>PSD/NNSR Threshold</b>	<b>PSD/NNSR Review Required</b>
PM <sub>10</sub>	+ 111.82	+ 6.04	+ 117.86	15 / NA	Yes
SO <sub>2</sub>	+ 6.26	+ 0.01	+ 6.27	40 / NA	No
NO <sub>x</sub>	+ 141.74	+ 2.49	+ 144.23	40 / 25	Yes
CO	+ 407.60	+ 15.17	+ 422.57	100 / NA	Yes
VOC	+ 101.70	+ 3.14	+ 104.86	NA / 25	Yes

Prevention of Significant Deterioration (PSD) review is required for this project, which results in a significant increase in emissions of a regulated pollutant.

The SPP is a major source as defined in the Federal NSR program. The emissions from the HAPF-2 by itself would not exceed the NSR major modification thresholds. However, considering that the HAPF is part of the original design of the SPP covered in the 2005 air permit application, the HAPF-2 is now considered part of SPP's NSR permitting for the purpose of the NSR applicability determination.

PSD is part of the federal NSR permitting program for pollutants in an attainment area. Iberville Parish is in an attainment area for all pollutants except ozone. The SPP-1 is categorized as one of the 28 sources listed in Section 169 of the Clean Air Act. With a potential to emit more than 100 tons of CO per year, the SPP is a major source as defined in LAC 33:III.509.B; therefore, PSD review is required.

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As a major source for CO, all attainment pollutants emitted in amounts greater than or equal to the PSD significance levels are also subject to PSD review. PSD review is required for all sources of PM<sub>10</sub>, CO, and NO<sub>2</sub>. Major stationary sources subject to PSD review are required to conduct the following analyses:

1. Best Achievable Control Technology (BACT) – The purpose of the BACT analysis is to ensure the application of BACT.
2. Air Quality Analysis – The intent of the Air Quality Analysis is to show that proposed emissions will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment. The air quality analyses for this project are conducted for PM<sub>10</sub>, NO<sub>2</sub>, and CO using an approved air quality dispersion model.
3. Additional Impacts Analyses – The Additional Impacts Analyses are used to assess the impacts of air, ground, and water pollution on soils, vegetation, and visibility caused by any increase in emissions and from associated growth.

For administrative purposes Shintech proposes a stand alone permit for the HAPF-2 unit. Because other parts of the SPP are not modified, the BACT analysis will be required for the HAPF-2 unit only. For the Air Quality Analysis, the emissions from the HAPF-2 will be added to the emissions from the rest of SPP-1, SPP-2, and HAPF-1 for an evaluation of the air quality impact from the SPP. In addition, the EPA has promulgated a new air quality model, AERMOD, after the 2005 permit, the AERMOD model will be used for this analysis.

The SPP is located in Iberville Parish, which is part of a nonattainment area for ozone. On June 15, 2005, the EPA revoked the 1-hour ozone ambient air quality standards and the Baton Rouge Nonattainment Area was reclassified as marginal for ozone precursors (NOX and VOC) under the new 8-hour ozone standards. The LDEQ made an emergency rule, AQ253E, regarding the change in the ozone standards and associated permitting requirements and the Emergency Rule became effective on June 15, 2005. According to the Emergency Rule, sources that were issued Nonattainment New Source Review (NNSR) permits before June 14, 2005 were subject to NNSR requirements under the serious or severe nonattainment classification depending on application completeness dates. For sources that had not applied for permit or sources that had administratively complete permit applications but the permits had not been issued, a new set of requirements applied based on anti-backsliding provisions. The new set of requirements were provided in Section H of the Emergency rule and later incorporated in the regular rule as Subsection M of Section 504. Under this new rule the applicability threshold for emission increase at a 50-tpy source is 25-tpy, and the emission offset ratio is 1 to 1.2.

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Because the air permit for SPP-1 was issued on July 27, 2005, the Section 504, Subsection M rather than Subsection D (i.e., the NNSR rule) applies. Shintech voluntarily used more stringent 1 to 1.3 offset ratio in the 2005 permit because that permitting process was nearly completed when the new rule took effect. For subsequent permitting actions, the 1 to 1.2 offset ratio in Subsection M would apply. The SPP-1 site, as permitted in July 2005, has more than 50 tpy of both NO<sub>x</sub> and VOC emissions and is required to have emission offsets at a ratio of 1.2 to 1 if a modification will result in additional 25 tpy or more of NO<sub>x</sub> or VOC emissions.

In anticipation of this rulemaking, Shintech voluntarily requests review as if the project were subject to NNSR under the severe nonattainment area classification.

On May 27, 2005, LDEQ issued two Emission Reduction Credit (ERC) Certificates to Shintech. One reflected the transfer of 126 tons of VOC credits from BCP Liquidating, LLC (AI 121722), and the other the transfer of 65.5 tons of ozone season NO<sub>x</sub> credits and 91.6 tons of non-ozone season NO<sub>x</sub> credits from Terra Mississippi Nitrogen, Inc. (AI No. 2245).

On July 27, 2005, LDEQ issued Permit No. 1280-00118-V0 to Shintech. This permit relied on 50.30 tons/yr of ozone season NO<sub>x</sub> credits, 70.41 tons/yr of non-ozone season NO<sub>x</sub> credits, and 81.07 tons/yr of VOC credits. Shintech still retained 15.20 tons/yr of ozone season NO<sub>x</sub> credits, 21.19 tons/yr of non-ozone season NO<sub>x</sub> credits, and 44.93 tons/yr of VOC credits.

On August 4, 2006, LDEQ issued another Emission Reduction Credit (ERC) Certificate to Shintech. This certificate reflected the transfer of 65.5 tons of ozone season NO<sub>x</sub> credits and 91.6 tons of non-ozone season NO<sub>x</sub> credits from BCP Liquidating, LLC (AI 121722). This gave Shintech a balance of credits of 80.70 tons of ozone season NO<sub>x</sub> credits and 112.79 tons of non-ozone season NO<sub>x</sub> credits.

On July 10, 2008, LDEQ issued Permit No. 3063-V0 to Shintech. This permit relied on 57.39 tons/yr of NO<sub>x</sub> credits (23.91 tons of ozone season NO<sub>x</sub> credits and 33.48 tons of non-ozone season NO<sub>x</sub> credits) and 42.12 tons/year of VOC credits. Shintech still retained 56.79 tons/yr of ozone season NO<sub>x</sub> credits, 79.31 tons/yr of non-ozone season NO<sub>x</sub> credits, and 2.81 tons/yr of VOC credits.

On February 27, 2009, LDEQ issued another Emission Reduction Credit (ERC) Certificate to Shintech. This certificate reflected the transfer of 7.43 tons of VOC credits from Melamine Plant (AI No. 2398) and 22.57 tons of VOC credits from Triad Nitrogen's Urea Plant (AI No. 2245). This gave Shintech a balance of credits of 32.81 tons of VOC credits.

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Also on February 27, 2009 LDEQ issued Permit No. 3064-V0 to Shintech. This permit relied on 3.24 tons/yr of NO<sub>x</sub> credits (1.35 tons of ozone season NO<sub>x</sub> credits and 1.89 tons of non-ozone season NO<sub>x</sub> credits) and 4.08 tons/year of VOC credits as offsets for NO<sub>x</sub> and VOC emissions for the HAPF-1 plant at a 1.3 to 1 ratio. Shintech still retained 55.44 tons/yr of ozone season NO<sub>x</sub> credits, 77.42 tons/yr of non-ozone season NO<sub>x</sub> credits, and 28.73 tons/yr of VOC credits.

LDEQ issued a modification to the SPP-1 permit no. 1280-00118-V1 dated February 27, 2009. This permit modification relied on 3.24 tons/yr of NO<sub>x</sub> credits (1.35 tons/yr ozone season and 1.89 tons/year non-ozone season NO<sub>x</sub>) and 4.91 tons/year of VOC credits total as offsets for NO<sub>x</sub> and VOC emissions from the SPP-1 are set at a 1.3 to 1 ratio. Shintech still retains 54.09 tons/yr of ozone season NO<sub>x</sub>, 75.53 tons/yr of non-ozone season NO<sub>x</sub> credits, and 23.82 tons/yr of VOC credits.

Shintech will use 3.24 tons/yr of NO<sub>x</sub> credits (1.35 tons of ozone season NO<sub>x</sub> credits and 1.89 tons of non-ozone season NO<sub>x</sub> credits) and 4.08 tons/year of VOC credits as offsets for NO<sub>x</sub> and VOC emissions for the proposed plant at a 1.3 to 1 ratio. LAER will also be applied to emissions of NO<sub>x</sub> and VOC.

#### **IV. Type of Review**

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, Nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD). PSD is required for PM<sub>10</sub>, NO<sub>x</sub> and CO emissions, which will be permitted under PSD-LA-739. New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) do apply.

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51.

#### LAER Analyses for NO<sub>x</sub> and VOC

##### HCl Production Furnace EQT0182 (EPN 2H-1)

The HCl Production Furnace is used to produce hydrochloric acid (HCl) by the oxidation of chlorinated VOC from the EDC distillation columns. Byproducts of this combustion reaction are carbon dioxide and water. The HCl will be removed by an HCl absorber/scrubber. Thermal



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oxidation provides safe, effective, and efficient control of almost any organic stream, provided that it is properly designed and maintained.

The heart of the HCl Production Furnace is a nozzle-stabilized flame maintained by, waste liquid injection, and supplemental air. Upon passing through the flame, the waste liquid is heated from its inlet temperature to its temperature to its ignition temperature. Any organic stream and air mixture will ignite if its temperature is raised to a sufficiently high level. Therefore, the level of VOC control is determined by the residence time and temperature in the furnace combustion chamber.

Pollutants that can be expected from HCl Production Furnace include products of combustion, i.e. PM<sub>10</sub> and NO<sub>x</sub>, and products of incomplete combustion, i.e. CO and VOC.

EPA's RBLC was searched for permitted furnaces in similar industrial uses for the 2005 LAER analysis. The lowest permitted emission rates nationally are:

- 0.03 lb NO<sub>x</sub> / MM Btu with LNB
- 0.058 lb VOC / MM Btu and 99.9% Destruction of VOC

Since 2005, no other more stringent emission rates have been proposed for this type of process. Shintech proposes to match or surpass the above emission rates with the following LAER:

- 0.0146 lb NO<sub>x</sub> / MM Btu using good combustion practices and SCR
- 0.0182 lb VOC / MM Btu and 99.9% Destruction of VOC

## **V. Credible Evidence**

Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit that state specific methods that may be used to assess compliance with applicable requirements, pursuant to 40 CFR Part 70 and EPA's Credible Evidence Rule, 62 Fed. Reg. 8314 (Feb. 24, 1997), any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed shall be considered for purposes of Title V compliance certifications. Furthermore, for purposes of establishing whether or not a person has violated or is in violation of any emissions limitation or standard or permit condition, nothing in this permit shall preclude the use, including the exclusive use, by any person of any such credible evidence or information.

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**VI. Public Notice**

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge, on <date>, 200X; and in the <local paper>, <local town>, on <date>, 200X. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on <date>. The draft permit was also submitted to US EPA Region VI on <date>. All comments will be considered prior to the final permit decision.

**VII. Effects on Ambient Air**

Emissions associated with the proposed facility were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS.

Dispersion Model(s) Used: AERMOD (Criteria Pollutants) and ISC3 (TAPs)

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS})
PM <sub>10</sub>	24-Hour	3.72	150
PM <sub>10</sub>	Annual	0.63	50
NO <sub>x</sub>	Annual	0.75	100
CO	1-hour	226.95	40,000
CO	8-hour	105.01	10,000
Ethylene dichloride	Annual	1.31	3.85
Vinyl chloride	Annual	1.56	1.19
Chlorine	8-hour	19.05	35.7

The toxics air quality dispersion modeling analysis was conducted in accordance with the approved air quality dispersion modeling protocol. For all TAPs other than vinyl chloride, the modeling results show that there were no ambient air impacts greater than ambient air standard (AAS), demonstrating compliance with LAC 33:III.5109.B. Vinyl chloride modeling results show that there were nine receptors with ambient air impacts greater than the AAS. The receptors are located along Evergreen Road and at a restricted public access cemetery located off Evergreen Road entirely within the boundaries of the Georgia Gulf Facility.

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The vinyl chloride AAS is based on an annual average. Since the receptor locations are in areas that are uninhabited and restricted access, long-term exposure to vinyl chloride is not expected. Additionally, modeling results show that the Shintech facility's contributions to the vinyl chloride impacts are relatively minor. A neighboring facility's vinyl chloride contributions to the nine receptors make up a significant portion of the predicted concentrations.

**VIII. General Condition XVII Activities**

Work Activity	Schedule	PM <sub>10</sub>	Emission Rates - tons			
			SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Equipment Opening Loss	120 hr/yr	-	-	-	-	0.003
HAPF Startup and Shutdown	576 hr/yr	0.043	0.003	-	-	0.031
Waste Heat Boiler Cleaning	4 cleanings/yr	0.200	-	-	-	-

**IX. Insignificant Activities**

ID No.:	Description	Citation
H-ISA1	Ethylene Glycol Tank	LAC 33:III.501.B.5.A.3
H-ISA2	Ammonia Tank	LAC 33:III.501.B.5.D

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X. Table 1. Applicable Louisiana and Federal Air Quality Requirements													
ID No.:	Description	LAC 33:III. Chapter											
		5 <sup>▲</sup>	509	9	11	13	15	2113	22	29*	51*	56	59*
UNF0004	HAPF2 - Facility Wide	1		1	1	1	2	1	1	1	1	1	1
EQT0182	2H-1 – Hydrochloric Acid Production Furnace				1	1	2		2		1		
EQT0183	2H-2 – HCl Storage Tank Scrubber							3			1		
EQT0184	2H-2A – HCl Storage Tank A							3			1		
EQT0185	2H-2B – HCl Storage Tank B							3			1		

\* The regulations indicated above are State Only regulations.

▲ All LAC 33:III Chapter 5 citations are federally enforceable including LAC 33:III.501.C.6 citations, except when the requirement found in the "Specific Requirements" report specifically states that the regulation is State Only.

**KEY TO MATRIX**

- 1 -The regulations have applicable requirements that apply to this particular emission source.
- The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 2 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- 3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank – The regulations clearly do not apply to this type of emission source.

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X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.:	Description	40 CFR 60 NSPS			40 CFR 61			40 CFR 63 NESHAP					40 CFR	
		A	Dc	Kb	A	FF	A	F	G	EEE	EEEE	NNNN	64	68
UNF0004	HAPF2 - Facility Wide	1			1	1	1				3		3	1
EQT0182	2H-1 – Hydrochloric Acid Production Furnace		1			1	1		1			3		
EQT0183	2H-2 – HCl Storage Tank Scrubber													
EQT0184	2H-2A – HCl Storage Tank A													
EQT0185	2H-2B – HCl Storage Tank B													

**KEY TO MATRIX**

- The regulations have applicable requirements that apply to this particular emission source.  
 -The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank – The regulations clearly do not apply to this type of emission source.

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<b>XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source</b>		
<b>ID No:</b>	<b>Requirement</b>	<b>Notes</b>
UNF0004 – HAPF2 Facility Wide	Emission Standards for Sulfur Dioxide (LAC 33:III.1503.C)	EXEMPT – Per LAC 33:III.1503.C, Sulfur Dioxide emissions less than 250 tons per year.
	40 CFR 63 Subpart EEEE – National emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) (40 CFR 63.2334(c)(1))	DOES NOT APPLY – Storage tanks, transfer racks, and equipment leak components that are part of an affected source under another 40 CFR 63 national emission standard for hazardous air pollutants (NESHAP) regulation are excluded from the affected source.
	40 CFR 64 – Compliance Assurance Monitoring (CAM)	DOES NOT APPLY – Facility does not have any Large PSEUs as defined by this part.
	Emission Standards for Sulfur Dioxide (LAC 33:III.1503.C)	EXEMPT – Per LAC 33:III.1503.C, Sulfur Dioxide emissions less than 250 tons per year.
EQT0182 – 2H-1: Hydrochloric Acid Production Furnace	Control of Nitrogen Oxides (LAC 33:III.2201.C.19)	EXEMPT – Per LAC 33:III.2201.C.19, Source treats hazardous waste and is regulated by LAC 33:V Chapter 30 and 40 CFR 264. HCl production furnace includes Selective Catalytic Reduction (SCR) for NO <sub>x</sub> reduction.
	40 CFR 63 Subpart NNNNN – National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production (40 CFR 63.8985)	DOES NOT APPLY – Gaseous streams containing HCl are recycled or routed to another process prior to being discharged to the atmosphere.

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XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source		
ID No:	Requirement	Notes
EQT0183, EQT0184, & EQT0185 – 2H-2,2 H-2A, & 2H-2B: Hydrochloric Acid Tank Scrubber and Hydrochloric Acid Tanks	Waste Gas Disposal (LAC 33:III.2115)	DOES NOT APPLY – Vent stream is not in VOC service.

The above table provides explanation for both the exemption status or non-applicability of a source cited by 1, 2 or 3 in the matrix presented in Section X (Table 1) of this permit.

**EMISSION RATES FOR CRITERIA POLLUTANTS**

AJ ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant

Activity Number: PER20070011

Permit Number: 3066-V0

Air - Title V Regular Permit Initial

Subject Item	CO			NOx		PM10			SO2		VOC		
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
Facility Wide													
EQT 0182 2H-1	3.46	4.16	15.17	0.57	2.49	1.38	1.65	6.04	<0.01	0.01	0.71	0.86	3.14

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote.



**EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS****AI ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant****Activity Number: PER20070011****Permit Number: 3066-V0****Air - Title V Regular Permit Initial**

<b>Emission Pt.</b>	<b>Pollutant</b>	<b>Avg lb/hr</b>	<b>Max lb/hr</b>	<b>Tons/Year</b>
<b>EQT 0182 2H-1</b>	1,1,2,2-Tetrachloroethane	0.007	0.009	0.032
	1,1,2-Trichloroethane	0.251	0.301	1.098
	1,2-Dichloroethane	0.039	0.046	0.169
	Ammonia	0.421	0.505	1.842
	Benzene	0.007	0.009	0.032
	Carbon tetrachloride	0.030	0.036	0.132
	Chlorine	0.260	0.320	1.150
	Chlorobenzene	0.005	0.007	0.024
	Chloroethane	<0.001	0.001	0.002
	Chloroform	0.035	0.042	0.155
	Chloroprene	0.015	0.018	0.065
	Dichloromethane	<0.001	<0.001	0.002
	Hexachloroethane	0.014	0.017	0.063
	Hydrochloric acid	0.140	0.160	0.590
	Tetrachloroethylene	0.003	0.004	0.013
	Trichloroethylene	0.003	0.004	0.013
	Vinyl chloride	0.003	0.004	0.015
	Vinylidene chloride	0.003	0.003	0.011
<b>EQT 0183 2H-2</b>	Hydrochloric acid	0.038	0.063	0.165
<b>UNF 0004 HAPF-2</b>	1,1,2,2-Tetrachloroethane			0.032
	1,1,2-Trichloroethane			1.098
	1,2-Dichloroethane			0.169
	Ammonia			1.842
	Benzene			0.032
	Carbon tetrachloride			0.132
	Chlorine			1.150
	Chlorobenzene			0.024
	Chloroethane			0.002
	Chloroform			0.155
	Chloroprene			0.065
	Dichloromethane			0.002
	Hexachloroethane			0.063
	Hydrochloric acid			0.755

**EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS****AI ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant****Activity Number: PER20070011****Permit Number: 3066-V0****Air - Title V Regular Permit Initial**

<b>Emission Pt.</b>	<b>Pollutant</b>	<b>Avg lb/hr</b>	<b>Max lb/hr</b>	<b>Tons/Year</b>
UNF 0004 HAPF-2	Tetrachloroethylene			0.013
	Trichloroethylene			0.013
	Vinyl chloride			0.015
	Vinylidene chloride			0.011

**Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote. Emission rates attributed to the UNF reflect the sum of the TAP/HAP limits of the individual emission points (or caps) under this permit, but do not constitute an emission cap.**

## SPECIFIC REQUIREMENTS

**AJ ID: 126578 - ShIntech Louisiana LLC - Plaquemine PVC Plant**

**Activity Number: PER20070011**

**Permit Number: 3066-V0**

**Air - Title V Regular Permit Initial**

### **EQT 0182 2H-1 - 2H-1 - Hydrochloric Acid Production Furnace**

- 1 [40 CFR 60.48c(a)] Submit notification: Due as specified in 40 CFR 60.7. Submit the date of construction or reconstruction and actual startup. Include the information specified in 40 CFR 60.48c(a)(1) through (a)(4) as applicable. Subpart Dc. [40 CFR 60.48c(a)]
- 2 [40 CFR 60.48c(g)(1)] Fuel rate recordkeeping by electronic or hard copy daily. Keep records of the amount of each fuel combusted during each day. Subpart Dc. [40 CFR 60.48c(g)(1)]
- 3 [40 CFR 60.48c(g)(2)] Fuel rate recordkeeping by electronic or hard copy monthly. Keep records of the amount of each fuel combusted during each calendar month. Subpart Dc. [40 CFR 60.48c(g)(2)]
- 4 [40 CFR 60.48c(i)] Maintain all records required under 40 CFR 60.48c for a period of 2 years following the date of such record. Subpart Dc. [40 CFR 60.48c(i)]
- 5 [40 CFR 61.354(c)] Monitoring data monitored by technically sound method daily. Inspect the data recorded by the monitoring equipment to ensure that the control device is operating properly. Subpart Ff. [40 CFR 61.354(c)]
- 6 [40 CFR 61.354(g)] Which Months: All Year Statistical Basis: None specified Pressure recordkeeping by recorder continuously. Subpart Ff. [40 CFR 61.354(g)]
- 7 [40 CFR 61.355] Determine compliance with 40 CFR 61 Subpart Ff using the test methods and procedures specified in 40 CFR 61.355(a) through (i), as applicable. Subpart Ff. Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency Maintain records as specified in 40 CFR 61.356(a) through (n), as applicable. Maintain each record in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified. Subpart Ff. For mercury, HCl, chlorine gas, lead, cadmium, arsenic, beryllium, chromium, and particulate matter -- do not discharge to the atmosphere gases containing combined HCl and Cl<sub>2</sub> >25 ppmvd corrected to 7% O<sub>2</sub> expressed as a chloride (Cl(-) equivalent; or HCl and Cl<sub>2</sub> emissions greater than the levels that would be emitted if the source is achieving a system removal efficiency (SRE) of less than 99.987% for total chlorine and chloride fed to the combustor per SRE = [1 - (Clout/Clin)] x 100%. [40 CFR 63.1218(b)]
- 10 [40 CFR 63.1218(b)] For dioxins and furans -- do not discharge to the atmosphere gases containing carbon monoxide >100 ppmvd corrected to 7% O<sub>2</sub> (1-hour rolling average) and document that hydrocarbons do not exceed 10 ppmvd corrected to 7% O<sub>2</sub> (1-hour rolling average) reported as propane during DRE test; or do not discharge to the atmosphere gases containing hydrocarbons >10 ppmvd corrected to 7% O<sub>2</sub> reported as propane (1-hour rolling average). [40 CFR 63.1218(b)]
- 11 [40 CFR 63.1218(c)] Achieve 99.99% DRE for principle organic hazardous constituent (POHC) as designated under 40 CFR 63.1218(c)(3). [40 CFR 63.1218(c)]
- 12 [LAC 33:III.1311.C] Opacity <= 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel).
- 13 [LAC 33:III.5107.A.2] Which Months: All Year Statistical Basis: Six-minute average Emits Class I and/or Class II TAP less than the MER (facility wide). Chapter 51 MACT is not required. Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- 14 [LAC 33:III.5109.A.1] Compliance with NESHAP 40 CFR 63 Subpart EEE has been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

### **EQT 0183 2H-2 - HCl Storage Tank Scrubber**

- 15 [LAC 33:III.5107.A.2] Emits Class III TAP only. Chapter 51 MACT is not required. Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.

# **SPECIFIC REQUIREMENTS**

**AJ ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant**  
**Activity Number: PER20070011**  
**Permit Number: 3066-V0**  
**Air - Title V Regular Permit Initial**

## **EQT 0184 2H-2A - Hydrochloric Acid Storage Tank A**

16 [LAC 33:III.5107.A.2] Emits Class III TAP only. Chapter 51 MACT is not required. Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.

## **EQT 0185 2H-2B - Hydrochloric Acid Storage Tank B**

17 [LAC 33:III.5107.A.2] Emits Class III TAP only. Chapter 51 MACT is not required. Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.

## **UNF 0004 HAPF-2 - Facility Wide**

18 [40 CFR 60.] All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A.  
19 [40 CFR 61.342(b)] Comply with the requirements of 40 CFR 61.342(c) through (h) no later than 90 days following the effective date, unless a waiver of compliance has been obtained under 40 CFR 61.11, or by the initial startup for a new source with an initial startup after the effective date. Subpart FF. [40 CFR 61.342(b)]  
20 [40 CFR 61.342(c)(1)(i)] Waste streams containing benzene: Remove or destroy the benzene contained in the waste using a treatment process or wastewater treatment system that complies with the standards specified in 40 CFR 61.348. Subpart FF. [40 CFR 61.342(c)(1)(i)]  
21 [40 CFR 61.355] Determine compliance with 40 CFR 61 Subpart FF using the test methods and procedures specified in 40 CFR 61.355(a) through (i), as applicable. Subpart FF.  
22 [40 CFR 61.356] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency Maintain records as specified in 40 CFR 61.356(a) through (n), as applicable. Maintain each record in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified. Subpart FF.  
23 [40 CFR 61.357(a)] Submit report: Due by initial startup. Submit a report that summarizes the regulatory status of each waste stream subject to 40 CFR 61.342 and is determined by the procedures specified in 40 CFR 61.355(c) to contain benzene. Include the information specified in 40 CFR 61.357(a)(1) through (a)(4). If there is no benzene onsite in wastes, products, by-products, or intermediates, submit an initial report that is a statement to this effect. Subpart FF. [40 CFR 61.357(a)]  
24 [40 CFR 61.357(d)(1)] Submit report: Due by the date of initial startup. Submit a certification that the equipment necessary to comply with 40 CFR 61 Subpart FF has been installed and that the required initial inspections or tests have been carried out in accordance with 40 CFR 61 Subpart FF. Subpart FF. [40 CFR 61.357(d)(1)]  
25 [40 CFR 61.357(d)(2)] Submit report: Due annually, beginning on the date that equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Submit updates to the information listed in 40 CFR 61.357(a)(1) through (a)(3) or, if the information in 40 CFR 61.357(a)(1) through (3) is not changed in the following year, a statement to that effect. Subpart FF. [40 CFR 61.357(d)(2)]  
26 [40 CFR 61.357(d)(6)] Submit report: Due quarterly, beginning three months after the date that the equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Submit a certification that all of the required inspections have been carried out in accordance with the requirements of 40 CFR 61 Subpart FF. Subpart FF. [40 CFR 61.357(d)(6)]

# **SPECIFIC REQUIREMENTS**

**AJID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant**

**Activity Number: PER20070011**

**Permit Number: 3066-V0**

**Alt - Title V Regular Permit Initial**

## **UNF 0004 HAPF-2 - Facility Wide**

- 27 [40 CFR 61.357(d)(7)] Submit report: Due quarterly, beginning three months after the date that the equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Include the information specified in 40 CFR 61.357(d)(7)(i) through (d)(7)(v). Subpart FF. [40 CFR 61.357(d)(7)]
- 28 [40 CFR 61.357(d)(8)] Submit report: Due annually, beginning one year after the date that the equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Submit a report that summarizes all inspections required by 40 CFR 61.342 through 61.354 during which detectable emissions are measured or a problem that could result in benzene emissions is identified, including information about the repairs or corrective action taken. Subpart FF. [40 CFR 61.357(d)(8)]
- 29 [40 CFR 61.] All affected facilities shall comply with all applicable provisions in 40 CFR 61 Subpart A.
- 30 [40 CFR 63.] All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A.
- 31 [40 CFR 68.12(b)(1)] Equipment/operational data recordkeeping by electronic or hard copy continuously. Document that the nearest public receptor is beyond the distance to a toxic or flammable endpoint defined in 68.22. [40 CFR 68.12(b)(1)]
- 32 [40 CFR 68.12(b)(2)] Complete the five-year accident history for the process as provided in 68.42. [40 CFR 68.12(b)(2)]
- 33 [40 CFR 68.12(b)(3)] Ensure that response actions have been coordinated with local emergency planning and response agencies. [40 CFR 68.12(b)(3)]
- 34 [40 CFR 68.12(b)(4)] Include in the RMP the certification specified in 68.12(b)(4). [40 CFR 68.12(b)(4)]
- 35 [40 CFR 68.150] Submit Risk Management Plan (RMP): Due no later than June 21, 1999, or three years after the date on which a regulated substance is first listed under 68.130, or the date on which a regulated substance is first present above a threshold quantity in a process. Submit in a method and format to a central point as specified by EPA prior to June 21, 1999.
- 36 [40 CFR 68.155] Provide in the RMP an executive summary that includes a brief description of the elements listed in 68.155(a) through (g).
- 37 [40 CFR 68.160] Complete a single registration form and include in the RMP. Cover all regulated substances handled in covered processes. Include in the registration the information specified in 68.160(b)(1) through (13).
- 38 [40 CFR 68.165] Submit in the RMP information one worst-case release scenario for each Program 1 process. Include the data specified in 68.165(b)(1) through (13).
- 39 [40 CFR 68.168] Submit in the RMP the information provided in 68.42(b) on each accident covered by 68.42(a).
- 40 [40 CFR 68.180] Provide in the RMP the emergency response information listed in 68.180(a) through (c).
- 41 [40 CFR 68.190(c)] Submit revised registration to EPA: Due within six months after a stationary source is no longer subject to 40 CFR 68. Indicate that the stationary source is no longer covered. [40 CFR 68.190(c)]
- 42 [40 CFR 68.190] Review and update the RMP as specified in 68.190(b) and submit it in a method and format to a central point specified by EPA prior to June 21, 1999.
- 43 [40 CFR 68.200] Maintain records supporting the implementation of 40 CFR 68 for five years unless otherwise provided.
- 44 [40 CFR 68.22] Use the endpoints specified in 68.22(a) through (g) for analyses of offsite consequences.
- 45 [40 CFR 68.25] Analyze the release scenarios in 68.25, as specified in 68.25(a) through (h).
- 46 [40 CFR 68.28] Identify and analyze at least one alternative release scenario for each regulated toxic substance held in a covered process(es) and at least one alternative release scenario to represent all flammable substances held in covered processes, as specified in 68.28(b) through (e).

# **SPECIFIC REQUIREMENTS**

**AI ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant**  
**Activity Number: PER20070011**  
**Permit Number: 3066-V0**  
**Air - Title V Regular Permit Initial**

## **UNF 0004 HAPF-2 - Facility Wide**

- 47 [40 CFR 68.30] Estimate in the RMP the population within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in 68.22(a).
- 48 [40 CFR 68.33] List in the RMP environmental receptors within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in 68.22(a).
- 49 [40 CFR 68.36(b)] Submit revised RMP: Due within six months after changes in processes, quantities stored or handled, or any other aspect of the stationary source increase or decrease the distance to the endpoint by a factor of two or more. [40 CFR 68.36(b)]
- 50 [40 CFR 68.36] Review and update the offsite consequence analyses at least once every five years. Complete a revised analysis within six months if changes in processes, quantities stored or handled, or any other aspect of the stationary source might reasonably be expected to increase or decrease the distance to the endpoint by a factor of two or more.
- 51 [40 CFR 68.39] Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain the records specified in 68.39(a) through (e) on the offsite consequence analyses.
- 52 [40 CFR 68.42] Include in the five-year accident history all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. Include the information specified in 68.42(b)(1) through (10) for each accidental release.
- 53 [LAC 33:III.1103] Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.111 or intensify an existing traffic hazard condition are prohibited.
- 54 [LAC 33:III.1109.B)] Outdoor burning of waste material or other combustible material is prohibited.
- 55 [LAC 33:III.1303.B)] Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited.
- 56 [LAC 33:III.2113.A)] Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A.1-5.
- 57 [LAC 33:III.219] Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance.
- 58 [LAC 33:III.2901.D)] Discharges of odorous substances at or beyond property lines which cause a perceived odor intensity of six or greater on the specified eight point butanol scale as determined by Method 41 of LAC 33:III.2901.G are prohibited.
- 59 [LAC 33:III.2901.F)] If requested to monitor for odor intensity, take and transport samples in a manner which minimizes alteration of the samples either by contamination or loss of material. Evaluate all samples as soon after collection as possible in accordance with the procedures set forth in LAC 33:III.2901.G.
- 60 [LAC 33:III.501.C.6)] Maintain best practical housekeeping and maintenance practices at the highest possible standards to control emissions of highly reactive volatile organic compounds (HRVOC), which include 1,3-Butadiene, Butene, cis-2-Butene, Ethylene, Propylene, Toluene, Xylene, m/p-Xylene, o-Xylene. (State Only).

**SPECIFIC REQUIREMENTS****AI ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant****Activity Number: PER20070011****Permit Number: 3066-V0****Air - Title V Regular Permit Initial****UNF 0004 HAPF-2 - Facility Wide**

- 61 [LAC 33:III.501.C.6] Maintain, to the extent practicable, a leak-free facility taking such steps as are necessary and reasonable to prevent leaks and to expeditiously repair leaks that occur. Update the written plan presently required by LAC 33:III.2113.A.4 within 30 days of receipt of this permit to incorporate these general duty obligations into the housekeeping procedures. The plan shall then be considered a means of emission control subject to the required use and maintenance provisions of LAC 33:III.905. Failure to develop, use, and diligently maintain the plan shall be a violation of this permit. (State Only).
- 62 [LAC 33:III.504] Comply with the requirements of the Nonattainment New Source Review Program. This permit includes provisions of the Nonattainment New Source Review Procedures (NNSR) from LAC 33:III.504.
- 63 [LAC 33:III.509] Comply with the requirements of PSD-LA-739. This permit includes provisions of the Prevention of Significant Deterioration (PSD) review from Permit PSD-LA-739.
- 64 [LAC 33:III.5107.A.2] Include a certification statement with the annual emission report and revisions to any emission report that attests that the information contained in the emission report is true, accurate, and complete, and that is signed by a responsible official, as defined in LAC 33:III.502. Include the full name of the responsible official, title, signature, date of signature and phone number of the responsible official.
- 65 [LAC 33:III.5107.A] Submit Annual Emissions Report: Due annually, by the 31st of March unless otherwise directed by DEQ, to the Office of Environmental Assessment in a format specified by DEQ. Identify the quantity of emissions in the previous calendar year for any toxic air pollutant listed in Table 51.1 or Table 51.3.
- 66 [LAC 33:III.5107.B.1] Submit notification: Due to the Department of Public Safety 24-hour Louisiana Emergency Hazardous Materials Hotline at (225) 925-6595 immediately, but in no case later than 1 hour, after any discharge of a toxic air pollutant into the atmosphere that results or threatens to result in an emergency condition (a condition which could reasonably be expected to endanger the health and safety of the public, cause significant adverse impact to the land, water or air environment, or cause severe damage to property).
- 67 [LAC 33:III.5107.B.2] Submit notification: Due to SPOC, except as provided in LAC 33:III.5107.B.6, no later than 24 hours after the beginning of any unauthorized discharge into the atmosphere of a toxic air pollutant as a result of bypassing an emission control device, when the emission control bypass was not the result of an upset, and the quantity of the unauthorized bypass is greater than or equal to the lower of the Minimum Emission Rate (MER) in LAC 33:III.5112, Table 51.1, or a reportable quantity (RQ) in LAC 33:III.3931, or the quantity of the unauthorized bypass is greater than one pound and there is no MER or RQ for the substance in question. Submit notification in the manner provided in LAC 33:III.3923.
- 68 [LAC 33:III.5107.B.3] Submit notification: Due to SPOC, except as provided in LAC 33:III.5107.B.6, immediately, but in no case later than 24 hours after any unauthorized discharge of a toxic air pollutant into the atmosphere that does not cause an emergency condition, the rate or quantity of which is in excess of that allowed by permit, compliance schedule, or variance, or for upset events that exceed the reportable quantity in LAC 33:III.3931. Submit notification in the manner provided in LAC 33:III.3923.
- 69 [LAC 33:III.5107.B.4] Submit written report: Due by certified mail to SPOC within seven calendar days of learning of any such discharge or equipment bypass as referred to in LAC 33:III.5107.B.1 through B.3. Include the information specified in LAC 33:III.5107.B.4.a.i through B.4.a.viii.
- 70 [LAC 33:III.5107.B.5] Report all discharges to the atmosphere of a toxic air pollutant from a safety relief device, a line or vessel rupture, a sudden equipment failure, or a bypass of an emission control device, regardless of quantity, IF THEY CAN BE MEASURED AND CAN BE RELIABLY QUANTIFIED USING GOOD ENGINEERING PRACTICES, to DEQ along with the annual emissions report and where otherwise specified. Include the identity of the source, the date and time of the discharge, and the approximate total loss during the discharge.

**SPECIFIC REQUIREMENTS****AJ ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant****Activity Number: PER20070011****Permit Number: 3066-V0****Air - Title V Regular Permit Initial****UNF 0004 HAPF-2 - Facility Wide**

71 [LAC 33:III.5109.C]

Develop a standard operating procedure (SOP) within 120 days after achieving or demonstrating compliance with the standards specified in LAC 33:III.Chapter 51. Detail in the SOP all operating procedures or parameters established to ensure that compliance with the applicable standards is maintained and address operating procedures for any monitoring system in place, specifying procedures to ensure compliance with LAC 33:III.5113 C.5. Make a written copy of the SOP available on site or at an alternate approved location for inspection by DEQ. Provide a copy of the SOP within 30 days upon request by DEQ.

72 [LAC 33:III.5113.A.1]

Submit notification in writing: Due to SPOC not more than 60 days nor less than 30 days prior to initial start-up. Submit the anticipated date of the initial start-up.

73 [LAC 33:III.5113.A.2]

Submit notification in writing: Due to SPOC within 10 working days after the actual date of initial start-up of the source. Submit the actual date of initial start-up of the source.

74 [LAC 33:III.535]

Comply with the Part 70 General Conditions as set forth in LAC 33:III.535 and the Louisiana General Conditions as set forth in LAC 33:III.537. [LAC 33:III.535, LAC 33:III.537]

75 [LAC 33:III.5609.A.1.b]

Activate the preplanned abatement strategy listed in LAC 33:III.5611 Table 5 when the administrative authority declares an Air Pollution Alert.

76 [LAC 33:III.5609.A.2.b]

Activate the preplanned strategy listed in LAC 33:III.5611 Table 6 when the administrative authority declares an Air Pollution Warning.

77 [LAC 33:III.5609.A.3.b]

Activate the preplanned abatement strategy listed in LAC 33:III.5611 Table 7 when the administrative authority declares an Air Pollution Emergency.

78 [LAC 33:III.5609.A]

Prepare standby plans for the reduction of emissions during periods of Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency.

79 [LAC 33:III.5901.A]

Design standby plans to reduce or eliminate emissions in accordance with the objectives as set forth in LAC 33:III.5611 Tables 5, 6, and 7.

80 [LAC 33:III.5907]

Comply with the provisions in 40 CFR 68, except as specified in LAC 33:III.5901.

Identify hazards that may result from accidental releases of the substances listed in 40 CFR 68.130, Table 59.0 of LAC 33:III.5907, or Table 59.1 of LAC 33:III.5913 using appropriate hazard assessment techniques, design and maintain a safe facility, and minimize the off-site consequences of accidental releases of such substances that do occur.

81 [LAC 33:III.5911.A]

Submit registration: Due January 31, 1998, or within 60 days after the source becomes subject to LAC 33:III.Chapter 59, whichever is later.

82 [LAC 33:III.5911.C]

Include the information listed in LAC 33:III.5911.B, and submit to the Office of Environmental Compliance.

83 [LAC 33:III.919.D]

Submit amended registration: Due to the Office of Environmental Compliance within 60 days after the information in the submitted registration is no longer accurate.

Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 31st of March for the period January 1 to December 31 of the previous year unless otherwise directed. Submit emission inventory data in the format specified by the Office of Environmental Assessment. Include all data applicable to the emissions source(s), as specified in LAC 33:III.919.A-D.



**General Information**

**AI ID: 126578 Shintech Louisiana LLC - Plaquemine PVC Plant**  
**Activity Number: PER20070011**  
**Permit Number: 3066-V0**  
**Air - Title V Regular Permit Initial**

Also Known As:	ID	Name	User Group	Start Date
	1280-00118	Shintech - Proposed PVC Plant	CDS Number	02-10-2005
	LA0120529	LPDES #	LPDES Permit #	06-15-2005
	LAR10D207	LPDES #	LPDES Permit #	10-01-2005
	WQC WW 050316-36	Water Quality Certification #	Water Certification	04-05-2005

**Physical Location:** 26270 Hwy 405  
 (portion of)  
 Plaquemine, LA 70764

**Mailing Address:** PO Box 358  
 Addis, LA 707100358

Related People:	Name	Mailing Address	Phone (Type)	Relationship
	James Bell	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Air Permit Contact For
	James Bell	PO Box 358 Addis, LA 707100358	2256851199 (ext 42)	Air Permit Contact For
	James Bell	PO Box 358 Addis, LA 707100358	JBELL@SHIN-TECH	Accident Prevention Billing Party for
	James Bell	PO Box 358 Addis, LA 707100358	2256851199 (ext 42)	Accident Prevention Billing Party for
	James Bell	PO Box 358 Addis, LA 707100358	JBELL@SHIN-TECH	Air Permit Contact For
	James Bell	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Emission Inventory Contact for
	James Bell	PO Box 358 Addis, LA 707100358	2256851199 (ext 42)	Emission Inventory Contact for
	James Bell	PO Box 358 Addis, LA 707100358	JBELL@SHIN-TECH	Emission Inventory Contact for
	James Bell	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Accident Prevention Contact for
	James Bell	PO Box 358 Addis, LA 707100358	2256851199 (ext 42)	Accident Prevention Contact for
	James Bell	PO Box 358 Addis, LA 707100358	JBELL@SHIN-TECH	Accident Prevention Contact for
	James Bell	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Accident Prevention Billing Party for
	Paul Clifton	6060 Perkins Rd Ste 100 Baton Rouge, LA 70808	2257667400 (WP)	Water Certification Contact for
	David Wise	PO Box 358 Addis, LA 707100358	2256851113 (WF)	Responsible Official for
	David Wise	PO Box 358 Addis, LA 707100358	2256851199 (WP)	Responsible Official for

Related Organizations:	Name	Address	Phone (Type)	Relationship
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256851199 (WP)	Owns
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Owns
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256851199 (WP)	Operates
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Operates
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Emission Inventory Billing Party
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256850062 (WF)	Water Billing Party for
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256851199 (WP)	Air Billing Party for

**General Information**

**AI ID: 126578 Shintech Louisiana LLC - Plaquemine PVC Plant**

**Activity Number: PER20070011**

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**Air - Title V Regular Permit Initial**

Related Organizations:	Name	Address	Phone (Type)	Relationship
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256850082 (WF)	Air Billing Party for
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256851189 (WP)	Emission Inventory Billing Party
	Shintech Louisiana LLC	PO Box 358 Addis, LA 707100358	2256851189 (WP)	Water Billing Party for

**Note:** This report entitled "General Information" contains a summary of facility-level information contained in LDEQ's TEMPO database for this facility and is not considered a part of the permit. Please review the information contained in this document for accuracy and completeness. If any changes are required or if you have questions regarding this document, you may contact Ms. Tommie Milam, Permit Support Services Division, at (225) 219-3259 or email your changes to [facupdate@la.gov](mailto:facupdate@la.gov).

**INVENTORIES**

**AI ID: 126578 - Shintech Louisiana LLC - Plaquemine PVC Plant**  
**Activity Number: PER20070011**  
**Permit Number: 3066-V0**  
**Air - Title V Regular Permit Initial**

**Subject Item Inventory:**

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
<b>Facility Wide</b>						
EQT 0182	2H-1 - 2H-1 - Hydrochloric Acid Production Furnace		39 MM BTU/hr	39 MM BTU/hr		8760 hr/yr
EQT 0183	2H-2 - HCl Storage Tank Scrubber					8760 hr/yr
EQT 0184	2H-2A - Hydrochloric Acid Storage Tank A					8760 hr/yr
EQT 0185	2H-2B - Hydrochloric Acid Storage Tank B					8760 hr/yr

**Stack Information:**

ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (oF)
<b>Facility Wide</b>							
EQT 0182	2H-1 - 2H-1 - Hydrochloric Acid Production Furnace	53.8	17402	2.62		82	356
EQT 0183	2H-2 - HCl Storage Tank Scrubber	1.2	24	.68		17	90

**Relationships:**

ID	Description	Relationship	ID	Description
EQT 0184	2H-2A - Hydrochloric Acid Storage Tank A	Vents to	EQT 0183	2H-2 - HCl Storage Tank Scrubber
EQT 0185	2H-2B - Hydrochloric Acid Storage Tank B	Vents to	EQT 0183	2H-2 - HCl Storage Tank Scrubber

**Subject Item Groups:**

ID	Group Type	Group Description
UNF 0004	Unit or Facility Wide	HAPF-2 - Facility Wide

**Group Membership:**

**NOTE: The UNF group relationship is not printed in this table. Every subject item is a member of the UNF group**

**Annual Maintenance Fee:**

Fee Number	Air Contaminant Source	Multiplier	Units Of Measure
1520	1520 Incinerators: A) 1,000 Lb/Hr and Greater Capacity	1	

**SIC Codes:**

4953	Refuse systems	UNF 004
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